<u>L6</u>

L5

<u>L4</u>

<u>L3</u>

<u>L2</u>

<u>L1</u>

<u>L6</u>

<u>L5</u> <u>L4</u>

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<u>L2</u>

<u>L1</u>

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	Search Results -		
	Terms Docun	ients	
	L7 and ((forecast\$ or predict\$ or guess\$) with availab\$)	7	
Database: Search:	US Patents Full-Text Database  US 240 Sent Substitution Substitution  If the Abstract Sent Sent Sent Sent Sent Sent Sent Sen	ch	
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Set Name		Hit Count	Set Name result set
DB=PO	GPB,JPAB,EPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES;		
<u>L8</u>	L7 and ((forecast\$ or predict\$ or guess\$) with availab\$)	7	<u>L8</u>
<u>L7</u>	@pd<=20000214 and ((schedul\$ or time) with simulat\$ with availab\$)	32	<u>L7</u>
DB=U	SPT; THES=ASSIGNEE; PLUR=YES; OP=OR		

L3 and ((schedul\$ or time) with simulat\$ with availab\$)

L4 and ((allocat\$ or assign\$) with agent or employ\$)

L3 and ((schedul\$ or time) with simulat\$)

L2 and @ad<=20000214

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## WEST

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## Generate Collection Print

L8: Entry 5 of 7

File: DWPI

Jan 21, 1999

DERWENT-ACC-NO: 1999-121322

DERWENT-WEEK: 200025

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TITLE: Skills based <u>scheduling</u> method e.g. for telephone call centre - facilitating true skill based <u>scheduling</u> of agents in telephone call centre using <u>simulation</u> tool to <u>predict</u> what fraction of <u>scheduled</u> agents from each skill group will be <u>available</u> to each call type during each <u>time</u> interval

INVENTOR: CROCKETT, G B; LEAMON, P H

PATENT-ASSIGNEE: IEX CORP (IEXIN)

PRIORITY-DATA: 1997US-0890228 (July 9, 1997)

### PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9903248 A2	January 21, 1999	E	035	H04M000/00
EP 995300 A2	April 26, 2000	E	000	H04M001/72
US 6044355 A	March 28, 2000		000	G06F017/30

DESIGNATED-STATES: CA AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
WO 9903248A2	July 9, 1998	1998WO-US14323	
EP 995300A2	July 9, 1998	1998EP-0935600	
EP 995300A2	July 9, 1998	1998WO-US14323	
EP 995300A2		WO 9903248	Based on
US 6044355A	July 9, 1997	1997US-0890228	

INT-CL (IPC): G06 F 17/30; H04 M 0/00; H04 M 1/72; H04 M 3/50

ABSTRACTED-PUB-NO: US 6044355A

BASIC-ABSTRACT:

The method involves generating net staffing data per call type defining, for each time interval to be scheduled, an estimate of a difference between a given staffing level and a staffing level needed to meet a current call handling requirement. Skills group availability data per call type is generated defining, for each combination of skill group and time interval to be scheduled, an estimate of a percentage of scheduled agents from each skill group that are available to handle a call.

The net staffing data and the skills group availability data are used to generate a schedule for each of the number of scheduled agents. A call handling simulation is run against the schedule. The net staffing data and the skills availability data are run as a result of the call handling simulation, and the steps are repeated until a given event occurs. The given event is a determination that the schedule meets some

given acceptance criteria. The given acceptance criteria includes an acceptable call handling performance level and an acceptable staffing level. The given event is a passage of a set period of time.

ADVANTAGE - Facilitates skills based <u>scheduling</u> of agents in call centre using <u>simulation</u> tool to <u>predict</u> what fraction of <u>scheduled</u> agents from each skill group will be available to each call type during each time interval being <u>scheduled</u>.

ABSTRACTED-PUB-NO: WO 9903248A EQUIVALENT-ABSTRACTS:

The method involves generating net staffing data per call type defining, for each time interval to be scheduled, an estimate of a difference between a given staffing level and a staffing level needed to meet a current call handling requirement. Skills group availability data per call type is generated defining, for each combination of skill group and time interval to be scheduled, an estimate of a percentage of scheduled agents from each skill group that are available to handle a call.

The net staffing data and the skills group availability data are used to generate a schedule for each of the number of scheduled agents. A call handling simulation is run against the schedule. The net staffing data and the skills availability data are run as a result of the call handling simulation, and the steps are repeated until a given event occurs. The given event is a determination that the schedule meets some given acceptance criteria. The given acceptance criteria includes an acceptable call handling performance level and an acceptable staffing level. The given event is a passage of a set period of time.

ADVANTAGE - Facilitates skills based <u>scheduling</u> of agents in call centre using <u>simulation</u> tool to <u>predict</u> what fraction of <u>scheduled</u> agents from each skill group will be <u>available</u> to each call type during each <u>time</u> interval being <u>scheduled</u>.

CHOSEN-DRAWING: Dwg.2/7

DERWENT-CLASS: W01 EPI-CODES: W01-C02G3A;

## WEST

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L8: Entry 2 of 7

File: EPAB

Jan 21, 1999

PUB-NO: WO009903248A2

DOCUMENT-IDENTIFIER: WO 9903248 A2

TITLE: SKILLS-BASED SCHEDULING FOR TELEPHONE CALL CENTERS

PUBN-DATE: January 21, 1999

INVENTOR-INFORMATION:

NAME

COUNTRY

CROCKETT, GARY B LEAMON, PAUL H

ASSIGNEE-INFORMATION:

NAME

COUNTRY

IEX CORP

US

APPL-NO: US09814323 APPL-DATE: July 9, 1998

PRIORITY-DATA: US89022897A (July 9, 1997)

INT-CL (IPC): <u>H04 M 0/</u> EUR-CL (EPC): H04M003/523

## ABSTRACT:

CHG DATE=19990905 STATUS=C>A method for scheduling personnel (e.g., agents) in a work environment based on personnel "skill" levels. The method facilitates true skills-based scheduling of agents in a telephone call center using a simulation tool to predict what fraction of scheduled agents from each "skill group" will be available to each "call type" during each time interval being scheduled. A feedback mechanism is used to adjust net staffing and skills usage data between iterations of a call handling simulation until a given schedule being tested through the simulator meets some acceptance criteria.

**Print** 

# WEST ...



Generate Collection

L8: Entry 3 of 7

File: EPAB Jan 17, 1996

PUB-NO: GB002291245A

DOCUMENT-IDENTIFIER: GB 2291245 A

TITLE: Tuning the interconnection strengths in artificial neural networks

PUBN-DATE: January 17, 1996

INVENTOR-INFORMATION:

NAME

HOPTROFF, RICHARD GEORGE

ASSIGNEE-INFORMATION:

NAME

HOPTROFF RICHARD GEORGE GB

APPL-NO: GB09413925

APPL-DATE: June 11, 1994

PRIORITY-DATA: GB09413925A (June 11, 1994)

INT-CL (IPC): G06 F 15/18 EUR-CL (EPC): G06N003/08

### ABSTRACT:

CHG DATE=19990617 STATUS=0> A process for tuning the interconnection strengths in artificial neural networks (ANNs) and similar machines. The process first generates a series of ANNs by <u>simulating</u> the steepest descent process on an error function, each <u>time</u> with one or more of the <u>available</u> observations withheld in order to measure the <u>predictive</u> performance of the ANN. Finally, the process is repeated without withholding any observations, using the previously obtained information about predictive performance to identify the best performing of the ANNs generated in the final process.

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Generate Collection Print

L8: Entry 4 of 7

File: EPAB

Jan 12, 1983

PUB-NO: EP000069329A1

DOCUMENT-IDENTIFIER: EP 69329 A1 TITLE: Management control system.

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PUBN-DATE: January 12, 1983

INVENTOR - INFORMATION:

COUNTRY

HAYNES, JAMES DAVID

KWIATKOWSKI, JEROME ADAM

MAPES, GLENN HARLAN

ASSIGNEE-INFORMATION:

NAME

COUNTRY

US

BALL CORP

APPL-NO: EP82105804

APPL-DATE: June 30, 1982

PRIORITY-DATA: US28146681A (July 8, 1981)

US-CL-CURRENT: 340/500; 705/24

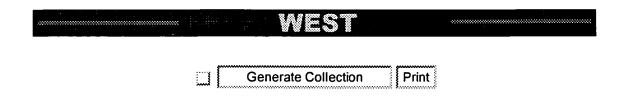
INT-CL (IPC): G06F 15/21

EUR-CL (EPC): G06F017/60

### ABSTRACT:

The present invention is a computer control system for a glass factory having a plurality of individual section glassware forming machines, commonly known as IS machines. The glass factory control system preferably comprises four microprocessor systems, respectively responsible for overall factory control, overall shop control, individual shop control and individual section control. In this regard it is noted that a factory comprises a plurality of shops, each including an individual IS machine. At the most general level, a microprocessor called the factory supervisory computer performs such functions as scheduling jobs, controlling inventory, forecasting sales, determining fuel availability and cost, providing job status, performing IS machine simulation and providing maintenance information. Generally, the supervisory computer coordinates the operations of the entire factory and is not concerned with the detailed operations of the IS machines. At the next level, another microprocessor called the console computer stores and manages all job history files, provides shop status information on demand and collects selected production data. Generally, the console computer is responsible for monitoring the operations of each of the shops and for retaining and modifying production and operating information. Each shop computer performs such functions as controlling a stacker motor, monitoring temperatures, storing section status information and storing job timing information in nonvolatile storage. Generally, each shop computer is responsible for the operation of the individual sections of the IS machine under its auspices. At the most specific level, each section computer controls the glassware forming mechanism of the associated individual section. Different levels of operator control analogs to the levels of the control system are provided. In organization, the supervisory computer is connected to the console computer and to the various production support and monitoring systems common to the factory. The

console computer is connected to each of the shop computers and also to the various production support and monitoring systems common to the factory. Each shop computer is connected to a plurality of section computers under its auspices and to the monitoring systems of the associated shop. Each section computer is connected to its associated individual section and to monitoring systems specific to the associated section.



L8: Entry 6 of 7 File: DWPI Jan 17, 1996

DERWENT-ACC-NO: 1996-052137

DERWENT-WEEK: 199807

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TITLE: Tuning of interconnection strengths in artificial neural networks - by simulating steepest descent process each time with observations on error function, to measure predictive performance of network and repeating process without with-holding observations using previously obtained predictive performance

INVENTOR: HOPTROFF, R G

PATENT-ASSIGNEE: HOPTROFF R G (HOPTI), COGNOS INC (COGNN)

PRIORITY-DATA: 1994GB-0013925 (July 11, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
GB 2291245 A	January 17, 1996		009	G06F015/18
GB 2291245 B	January 28, 1998		000	G06F015/18

### APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
GB 2291245A	July 11, 1994	1994GB-0013925	
GB 2291245B	July 11, 1994	1994GB-0013925	

INT-CL (IPC): G06 F 15/18

ABSTRACTED-PUB-NO: GB 2291245A

BASIC-ABSTRACT:

The method involves generating a series of automatic neural networks by <u>simulating</u> the steepest descent process on an error function, each <u>time</u> with one or more of the <u>available</u> observations withheld in order to measure the <u>predictive</u> performance of the automatic neural network.

Finally the process is repeated without withholding any observations using the previously obtained information about predictive performance to identify the best performing of the automatic neural networks generated in the final process.

ADVANTAGE - Provides greater ability to identify patterns in observations. Accurate results are obtained if observations are not in time series.

ABSTRACTED-PUB-NO: GB 2291245B EQUIVALENT-ABSTRACTS:

The method involves generating a series of automatic neural networks by <u>simulating</u> the steepest descent process on an error function, each <u>time</u> with one or more of the <u>available</u> observations withheld in order to measure the <u>predictive</u> performance of the automatic neural network.

Finally the process is repeated without withholding any observations using the

previously obtained information about predictive performance to identify the best performing of the automatic neural networks generated in the final process.

ADVANTAGE - Provides greater ability to identify patterns in observations. Accurate results are obtained if observations are not in time series.

CHOSEN-DRAWING: Dwg.0 Dwg.0/0

DERWENT-CLASS: T01

EPI-CODES: T01-J16C1; T01-J16C2;

## WEST

Generate Collection

Print

L8: Entry 1 of 7

File: JPAB

Feb 16, 1996

PUB-NO: JP408045805A

DOCUMENT-IDENTIFIER: JP 08045805 A TITLE: PRODUCTION CONTROL SYSTEM

......

PUBN-DATE: February 16, 1996

INVENTOR-INFORMATION:

NAME COUNTRY

NAKAJIMA, KIYOKO

ASSIGNEE-INFORMATION:

NAME COUNTRY

FUJITSU LTD

APPL-NO: JP06177785 APPL-DATE: July 29, 1994

INT-CL (IPC): H01 L 21/02; B23 Q 41/08; G05 B 15/02; G06 F 17/60

### ABSTRACT:

PURPOSE: To efficiently produce a lot of higher priority, by predicting a production completion date of the lot of higher priority from the processing time and the number of lots to be processed, and giving an alarm when it is judged that the production completion date of the lot of higher priority is later than a set delivery date.

CONSTITUTION: A simulation execution part 10 has an internal clock. The <u>simulation</u> execution part 10 predicts a production completion date of a lot of higher priority through <u>simulation</u> from the processing time and the number of lots to be processed in consideration of <u>device availability</u>, waiting <u>time</u> and priority of the lots. An evaluation part 11 sends an alarm command when it determines that the start of processing at a present time point for a normal lot of lower priority will disturb the observance of the delivery date of the lot of higher priority. An operator, notified by an alarm given by an apparatus 3 on the production site, waits for arrival of the lot of higher priority and processes the lot of higher priority first.

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Sep 11, 1991

## WEST

## **End of Result Set**



Generate Collection Print

File: DWPI

DERWENT-ACC-NO: 1991-268385 DERWENT-WEEK: 199633

L8: Entry 7 of 7

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TITLE: Parallel processing system providing real-time logical inferencing - includes

systolic cellular processor which provides predictable and responsive

INVENTOR: CURRIE, D H; MORLEY, R E ; SZAKACS, G L

PATENT-ASSIGNEE: FLAVORS TECHNOLOGY INC (FLAVN), FLAVORS TECHN INC (FLAVN)

PRIORITY-DATA: 1990EP-0302551 (March 9, 1990)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 445456 A	September 11, 1991		000	
DE 69027299 E	July 11, 1996		000	G06F015/80
EP 445456 B1	June 5, 1996	E	039	G06F015/80

DESIGNATED-STATES: DE FR GB

CITED-DOCUMENTS: 5.Jnl.Ref

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
EP 445456A	March 9, 1990	1990EP-0302551	
DE 69027299E	March 9, 1990	1990DE-0627299	
DE 69027299E	March 9, 1990	1990EP-0302551	
DE 69027299E		EP 445456	Based on
EP 445456B1	March 9, 1990	1990EP-0302551	

INT-CL (IPC): G06F 15/80

ABSTRACTED-PUB-NO: EP 445456A

BASIC-ABSTRACT:

The system comprises a number of separate processor cells each having its own local memory, the cells running simultaneously and operative to execute their respective program instructions. A global memory is coupled via a global bus to the processor cells and provides data to the cells and stores data from the cells. The bus provides effectively simultaneous access of all cells to the global memory.

A further feature of the system is a parallel programming language using English syntax and which provides synchronous and predictable binding of code to each cell. A graphic work station is provided as a user interface to provide visual access to each cell or to cell groups for ease of control. The system can also function to emulate large scale integrated circuit processors by reason of the fine grain programmed operation of the system.

ADVANTAGE - Increased computer processing speed.

ABSTRACTED-PUB-NO: EP 445456B EQUIVALENT-ABSTRACTS:

A parallel processing system having a plurality of physical processors and a bus connecting said plurality of processors to a common physical memory called global memory, characterised in that said system is a multiple instruction single-data (MISD) parallel processing system providing real-time logical inferencing and that each of said plurality of physical processors (30) is software-partitioned into at least one simulated processor cell (75) such that each simulated processor cell executes an instruction set that differs from the instruction set of its physical processor, each processor cell having local memory means (RAM, 88, 89) for storing program data, and for storing intermediate data that results from processing of the program data, the processing being divided into a sequence of time frames, each simulated processor cell executing program statements without interrupting any other processor cell or being interrupted by any other processor cell, and each processor cell having its own instruction stream of program statements between the local memory means and the processor cell, and its own data stream between the local memory means and the processor cell; the global memory means (26) sequentially and systolically storing a sequence of states of final data, each state of final data corresponding to a frame of said sequence of time frames, said state of final data being obtained from the plurality of processor cells, and said state of final data being available to the processor cells, said global memory means serving as a sole means of communications among the cells; and bus means (24) connected to the global memory means and to each physical processor, for providing all <u>simulated</u> processor cells of each physical processor with access to each state of said sequence of states stored in the global memory means such that each cell predictably accesses the same state stored in the global memory means within each processing time frame; each cell importing data from a current state of data stored in the global memory means and exporting data to be stored in a new state in the global memory means, each processor cell having access to data from other cells only via the global memory means.

CHOSEN-DRAWING: Dwg.1/24 Dwg.1/24

DERWENT-CLASS: T01

EPI-CODES: T01-H05B; T01-J; T01-J02C; T01-J09;

WEST

Generate Collection

Print

## **Search Results -** Record(s) 1 through 7 of 7 returned.

1. Document ID: JP 08045805 A

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L8: Entry 1 of 7

File: JPAB

Feb 16, 1996

PUB-NO: JP408045805A

DOCUMENT-IDENTIFIER: JP 08045805 A TITLE: PRODUCTION CONTROL SYSTEM

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC | Draw Desc | Clip Img | Image |

2. Document ID: WO 9903248 A2

L8: Entry 2 of 7

File: EPAB

Jan 21, 1999

PUB-NO: WO009903248A2

DOCUMENT-IDENTIFIER: WO 9903248 A2

TITLE: SKILLS-BASED SCHEDULING FOR TELEPHONE CALL CENTERS

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Draw Desc Image

KMC

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3. Document ID: GB 2291245 A

L8: Entry 3 of 7

File: EPAB

Jan 17, 1996

PUB-NO: GB002291245A

DOCUMENT-IDENTIFIER: GB 2291245 A

TITLE: Tuning the interconnection strengths in artificial neural networks

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Draw Desc Image

DMC

4. Document ID: EP 69329 A1

L8: Entry 4 of 7

File: EPAB

Jan 12, 1983

PUB-NO: EP000069329A1

DOCUMENT-IDENTIFIER: EP 69329 A1 TITLE: Management control system.

Full Title Citation Front Review Classification Date Reference Sequences Attachments

Draw Desc Clip Imp Image

KOMC

5. Document ID: WO 9903248 A2 EP 995300 A2 US 6044355 A

L8: Entry 5 of 7

File: DWPI

Jan 21, 1999

DERWENT-ACC-NO: 1999-121322

DERWENT-WEEK: 200025

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TITLE: Skills based <u>scheduling</u> method e.g. for telephone call centre - facilitating true skill based <u>scheduling</u> of agents in telephone call centre using <u>simulation</u> tool to <u>predict</u> what fraction of <u>scheduled</u> agents from each skill group will be <u>available</u> to each call type during each time interval

Full Title Citation Front Review Classification Date Reference Sequences Attachments

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6. Document ID: GB 2291245 A GB 2291245 B

L8: Entry 6 of 7

File: DWPI

Jan 17, 1996

DERWENT-ACC-NO: 1996-052137

DERWENT-WEEK: 199807

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TITLE: Tuning of interconnection strengths in artificial neural networks - by simulating steepest descent process each time with observations on error function, to measure predictive performance of network and repeating process without with-holding observations using previously obtained predictive performance

Full Title Citation Front Review Classification Date Reference Sequences Attachments

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KORGC

7. Document ID: EP 445456 A DE 69027299 E EP 445456 B1

L8: Entry 7 of 7

File: DWPI

Sep 11, 1991

DERWENT-ACC-NO: 1991-268385

DERWENT-WEEK: 199633

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TITLE: Parallel processing system providing real-time logical inferencing - includes systolic cellular processor which provides predictable and responsive

Full Title Citation Front Review Classification Date Reference Sequences Atlachments

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ROME

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Terms Documents

L7 and ((forecast\$ or predict\$ or guess\$) with availab\$) 7

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